

## The relationship between online sale and customer value co-creation: The mediating role of e-satisfaction and e-trust

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### ABSTRACT

The aim of this research is to identify the relationship between online sale and customer value co-creation. In addition, to identify the mediating role of E-Satisfaction and E-Trust in the relationship between the online sale and customer value co-creation. This study selected a sample of 364 customers who shopped from the Modanisa website in Jordan, and a structural equation modeling (SEM) approach was applied in this study to suit the nature of the study and to achieve the desired goals. This approach is based on showing the variables' relationship with each other. In this study, the relationship between online sale and customer value co-creation was influenced by E-trust and E-satisfaction. As per the results have indicated the foregoing, the analysis exhibited a favorable relation between them. E-trust impacts online sale and customer value relationship CO-creation, E-satisfaction affects the connection between the customer and online sales value. In addition, this study proves that online transactions contribute to the CO-creation of customer value for Modanisa. The customer value of CO-creation is, however, influenced by online purchases by E-trust and E-satisfaction in the Modanisa site. The findings of the study show that consumers with the higher online sale are far more committed to rising customer value by enhancing E-trust and E-satisfaction.

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## 1. Introduction

Ongoing technological developments, connected to capitalism, shifts in purchasing behaviors, and amended consumption patterns, had also complicated the differentiation of companies' rivals in competitive industries. The modern economic and community paradigm calls for deeper analysis mostly on the marketing concept of generating value (Kotler et al., 2010). Online sale is a model that allows customers to purchase goods and services directly from the seller through the Internet using the web browser and applications. Therefore, customers can buy goods online using different ways of communication technology (Alsafadi et al., 2020). However, the use of the internet became a major means of purchase among individuals (Aljawarneh et al., 2020). Through the Internet, the buying and selling of goods and services take place on the Internet where customers and sellers meet in the digital world in many sites to offer goods and services (Kitaneh, 2009). Value Co-creation implies that the process results in a valuable outcome by competing parties. (Prahalad & Ramaswamy, 2004). Few researchers are exploring the incentive of customers to be active in recognizing the significance of identifying catalysts leading to value-co-creation motives for buyers (Aljawarneh & Atan, 2018). Suppliers offer ingredients with manufacturers in some kind of a conventional value-creation process, who then create goods for customers (Al-Omari et al., 2020). Increasing the value with an exchange of financial by both the producer and supplier throughout the type including its commodity which would be sold to the consumer (Vargo et al., 2008). Corporations, therefore, concentrate on communication and try to draw on financial

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value (Pralhad & Ramaswamy, 2004). Customer feedback can improve any organization's products and services and without it, the organization would be limited to evaluate the customers' needs and experiences (Alshare et al., 2020). E-Satisfaction is a customer experience during the specific stages of online purchase (Mahafzah et al., 2020). (McKinney et al., 2002). There are studies that prove that the quality of the electronic service and electronic satisfaction are two main factors for creating E-Trust, while these factors have direct and indirect effects on E-Trust (Reichheld and Scheffer, 2000). Throughout the market these days, E-satisfaction mostly as a concept is becoming more and more important (Alomari et al., 2020). Service quality is analyzed by following an increasing agreement in which client satisfaction is not only a vital success result and therefore a major aspect of online customer purchase intentions in online shopping as in conventional retailing's (Masa'd & Aljawarneh, 2020). Throughout 2017, Arab Advisors Group conducted a questionnaire of online shoppers in Jordan. The report indicated that in 2017 34, 4% of web users were purchasing or paying for online items and/or services, which was up against 15, 4% in 2010. In addition, these findings indicate the willingness of Jordanians to pay money online to take advantage of online transactions (Al-Jawarneh, 2016). After all, Jordanians are also exposed to obstacles to internet purchases because of certain issues that impact their buying perceptions (Aljawarneh & Al-Omari, 2018). Such issues include the absence of internet and the ability to use internet devices, lack of information about web access, people profiles, consumer and confidence features, internet payment processing, and confidentiality and product issues (Alsmadi, 2002). The researcher is trying to find a better way to improve Online Sale and Customer value CO-creation with the mediating role of E-satisfaction and E-Trust (Aljawarneh et al., 2020). Szymanski and Henard (2001) indicated that the influence of E-Satisfaction on the connection among online sale and customer value co-creation is greater offline, so when customers are satisfied with a particular website for sale online, they will buy more of it, and they become to have the intention to purchase, and they will also be keen to recommend the product or service to their friends (Al-Da'abseh, et al., 2018). Hence, customer satisfaction and retention have become more important for online shopping sites (Devaraj, 2002). The purpose of the present study attempts to find a better way to improve online sale and customer value co-creation with the mediating role of E-satisfaction and E-Trust (Al-Omari et al., 2018). Online sale and customer value co-creation are significant as it is the major part of modern life and its needs (Alzoubi et al., 2020).

This paper is organized as follows: first, the theoretical framework of the study. Second, the methodological procedures. Third, the results of the study. Finally, discussions and conclusions.

## 2. Theoretical literature review

### 2.1. Online Sale and Customer Value CO-Creation

Throughout the field of co-creation, analysis demonstrates all ideas as relevant to clients, staff, organizations, technologies, and customer relationships. In accordance with the research of Bowden et al. (2017), this study reveals that significant validated online sale has beneficial impacts that encourage co-creation value (Banyhamdan et al., 2020). Clients with positive interaction habits, so that they are pleased, respected, and perceive mutuality, are more likely to co-create value (al-Bourini et al., 2020). The main result applies to the attitudes and behavior of service employees, particularly compassion, and responsiveness. Ease of use is an important component of the customer use of computing technology (Morris and Turner, 2001) and is of specific significance to modern consumers (Gefen and Straub, 2000). It is a determinant of product performance (Dabholkar, 1996) and is crucial for consumer satisfaction because it increases the productivity of the usage of the service (Xue and Harker, 2002). Safa and Ismail (2013) noted that the value-creating business and the consumer online sale are the strategic edges of a local alternative, and observed that customer engagement in value co-creation would increase the efficiency of the enterprise. Primary value-creating practices can improve their service capability, improve the intensity of operation, impact the ability of the business to customize; they will impact the current competitive strength of the company. On the basis of the mentioned research scholars, it's been observed that Co-creating value can enhance the awareness of the business, affect the capacity of the business to serve since the business has a critical part to play; that the consumer is interested in joining to build the value of the business in order to better satisfy their prices of goods or services (Ma and Wei, 2012).

**H<sub>1</sub>:** *Online sale is positively related to Customer Value CO-Creation.*

### 2.2. E-Satisfaction

E-satisfaction is a significant subject of research, a key element in dealing with competitors and gaining market share (Zeglat et al., 2016). Though because of the various interactions with all other factors, it is a challenging term to describe. However, an attitudinal disposition can be recognized, which affects the actions of the consumer and the evaluation of the goods, and this in turn determines the loyalty of the client (Zhang & Dran, 2000). The factors of the development (Szymanski & Hise, 2000) have been examined, such as its connection with online sale and customer value co-creation (Cyr et al., 2008). The interaction between e-satisfaction and online sale, such as the quality of knowledge and consumer preferences, has also been modeled by a group of studies (McKinney et al., 2002). According to Al-dweere et al. (2017) e-satisfaction is positively related to the relation between customer value co-creation and online sale. However, it was explained that the outcomes from the variables within the online satisfaction and e-satisfaction. In addition, Szarucki and Menet, (2018) in their study examined

the ability to deliver consumer value and loyalty as part of the service marketing strategy. However, we investigate the following hypothesis to study the relation between Customer Value CO-Creation and Online Sale considering the e-satisfaction as a mediator.

**H<sub>2</sub>:** *E-Satisfactions Mediates the relationship between online sale and Customer Value CO-Creation*

**H<sub>4</sub>:** *E-Satisfaction and E-Trust sequentially mediates the relationship between Online Sales and Customer Value CO-Creation.*

### 2.3. E- Trust

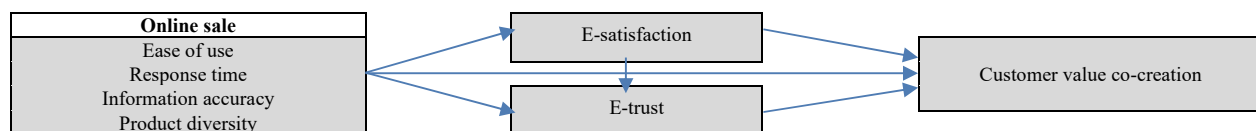
Pappas et al. (2017) in the study of Value co-creation and trust in social commerce illustrated how customer and company value-co-creation and core elements of trust converge to affect the buying intentions of consumers in social business. By exploring the interaction between variables the value of co-creation can be more critical than e-trust in achieving high online purchases. Ziaullah and Akhter (2014) in the study of E-trust explored the relationships between E-satisfaction, E-trust, and online sale as mediating roles are significant. The positive impact of E-satisfaction on trust can be observed in online sales. However, the beneficial impact of E satisfaction and E trust of the service provider has been demonstrated (Pavlou, 2003). Similar to these results, the satisfactory interaction of consumers with a particular online shop is anticipated to accelerate their desire to accept further online transactions, and also their confidence in the electronic websites as well. E- Satisfaction with the particular implementation of the system would improve trust in the market as a whole. However, we investigate the following hypothesis to study the relation between Customer Value CO-Creation and Online Sale considering the e-trust as a mediator.

**H<sub>3</sub>:** *E- Trust mediates the relationship between Online Sale and Customer Value CO-Creation.*

**H<sub>4</sub>:** *E-Satisfaction and E-Trust sequentially mediates the relationship between Online Sales and Customer Value CO-Creation.*

## 3. Theoretical Framework

Based on the literature reviewed for this paper we develop a model shown in Fig. 1.



**Fig. 1.** Research theoretical model

## 4. Methodology

### 4.1. Procedure

**First**, the survey elements were first developed in English and then translated back into Arabic by a linguist (Perrewe et al., 2002).

**Second**, Prior to data collection, the management of the surveyed establishment was contacted by email for permission. To verify the validity of the study variables, the researcher presented the survey questions in their initial form to a group of arbitrators totaling seven faculty members. Or paragraphs, and in the end, some changes and modifications were made.

**Finally**, a pilot study was conducted with 30 questionnaires distributed manually to 30 participants from outside the target study sample to test the reliability of the study and to ensure that the participants were able to understand the questions.

### 4.2. Data collection

The data were collected by using simple random sampling, according to Dwidri (2000). The data were collected by distributing the questionnaire online to the Jordanian customers who shopped from the Modanisa website. This site was chosen because it is considered one of the distinctive and unique sites in selling women's Islamic fashion, dresses, and accessories. Modanisa website is the first Turkish site that deals with 75 countries, including Jordan, and has more than 6 million visitors per month. There are more than 300 different brands and fashion brands on Modansia. In addition to the exclusive offers provided by the

site on a regular and continuous basis. Modanisa is available in two languages, Arabic and English so that the user can understand the site without any complication ("Modanisa Website," 2016). The number of surveys distributed was (364) and the answers were (364) valid answers.

#### 4.3. Constructs measurement

The questionnaire developed for this research was adapted from the existing leading literature in the field. A 5-Likert scale was used as followed by previous studies, and answers ranged from strongly disagree to strongly agree. Online sale was measured using 20 items as following: Ease of use adopted from (Teo et al., 2000), Response time adopted from (Al-Adaileh, 2015), Information accuracy adopted from (Shabeel, 2012), Product diversity adopted from Wang and Chou (2014), and Hernandez et al. (2009). Customer value CO-creation was measured using 12 items adopted from Yim et al., (2012) and Yi and Gong (2013). E-Satisfaction was measured using 7 items adopted from Lee and Lin (2005), Kim and Jackson (2009), Yao and Liao (2011), (Mustafa, 2011) and Xiaoying Guo et al. (2012). E-Trust was measured using 5 items based on Ribbink et al. (2004).

### 5. Data analysis and Results

In this section, data that has been collected from the survey are presented and analyzed statistically.

First, demographic information is analyzed using descriptive analysis such as frequency and mean were used in the analyses, second, analysis of data is presented for each variable and its indicators, third, the generated hypotheses are tested, using structural equation modeling (SEM).

IBM SPSS 25.00 and IBM SPSS AMOS 25.00 software were used to interpret the data collected by the questionnaire and in order to measure mediation effects. The frequency, percentage, and standard deviation of the respondents were calculated using descriptive statistical methods. Due to the conceptual research model method that was developed for this research, the Structural Equation Modeling (SEM) technique was adopted, This is due to the fact that SEM is one of the most common methods used by practitioners in the field of Management Business and marketing research, especially in order to assess the causal research model and research hypotheses (Ringle et al., 2018).

SEM allows researchers to test a bunch of interrelated hypotheses by evaluating the relationships between many independent and dependent fixtures in a structural model (Gefen& Straub, 2000). AMOS software version 24 was used in this research in order to estimate model measurement and structural models (Byrne, 2013).

#### 5.1. Descriptive analysis

First, the gender of customers participating in the research is 15.4% of them are male and 84.6% of them are female. Second, the age of the customers participating in the research. The age of the customers participating in the research, 8.5% of them are in the age under 20 year's, 42.3% in the age of 21-30 year's, 31.6% in the age of 31-40 year's, 13.5% in the age of 41-50 year's, 4.1% in the age over 51 years. The most age of the distribution is the age of 21-30 year's. Third, the monthly income of customers participating in the research. The monthly income of customers participating in the research, 41.5% of customers their monthly income less than 500 dinars, 36.5% of customers their monthly income from 501-999 dinars, 15.4% of customers their monthly income from 1000-1499 dinars. 6.6% of customers have their monthly income over 1500 dinars. The most monthly income of the distribution was less than 500 dinars. Fourth, the participants' educational status, 8.5% graduated from high school, 50% has a bachelor degree, 23.4% a master degree, 18.1% a PHD degree.

#### 5.2. Model Measurement

A confirmatory factor analysis (CFA) was administered (Alwagfi et al., 2020). This is often because CFA may be a statistical technique that won't verify the factor structure of a group of observed variables as noted by Harrington (2008). Bagozzi and Yi (1988) added that CFA assists scholars and researchers in identifying and determining construct validity (i.e., convergent, discriminant, and nomological validity). CFA was conducted on the general model.

As shown in Table 1, the retained scale items from the confirmatory factor analysis have standardized factor loadings (SFL) above 0.50 as noted by Bagozzi (1980); and Bagozzi & Yi (1988). The SFL values ranged from (.501-.940). Hair et al. (1998) added that composite reliability (CR) above .70 and average variance extract (AVE) above .50. The obtained results provided evidence of convergent and discriminant validity. The accepted threshold for the Cronbach alpha was also above .70, thus satisfying internal consistency and scale reliability (Cronbach, 1951; Hair et al., 1998; Jöreskog, 1971).

**Table 1**  
CFA standardized loading, AVE, CR.

Variables	Paragraphs	Standardize loading ( $\lambda$ )	CR	AVE
<b>Ease of use</b> ( $\alpha=.76$ )	The Modanisa website is easy to use.		<b>0.81</b>	
	The Modanisa website is easy to learn.	<b>.885</b>		
	The Modanisa website is user friendly.	<b>.852</b>		
	The Modanisa website is easy to master.	<b>.820</b>		
<b>Response</b> <b>time</b> ( $\alpha=.77$ )	This website provides its services to the customer at the required time.	<b>.933</b>	<b>0.95</b>	<b>0.75</b>
	This website works to create trust with the customer at the time of providing the service.	<b>.888</b>		
	This website delivers the product to the customer on time.	<b>.852</b>		
	This website responds to customer purchase requests according to priority at the time of ordering.	<b>.922</b>		
	This website provides the customer with a choice of product and making a purchase with minimal time and effort.	<b>.752</b>		
	This website responds quickly to customer requirements.	<b>.834</b>		
<b>Information</b> <b>accuracy</b> ( $\alpha = .76$ )	The online sale system for this website is characterized by the integration of its information.	<b>.554</b>	<b>0.89</b>	<b>0.57</b>
	The online sale system for this website is characterized by the credibility of the information provides to the customer.	<b>.823</b>		
	The online sale system for this website is characterized by the accuracy of information.	<b>.782</b>		
	The online sale system constantly updates product information.	<b>.758</b>		
	The online sale system for this website provides the information needed to help customers make a decision.	<b>.715</b>		
<b>Product diversity</b> ( $\alpha = .74$ )	This website diversifies its products to satisfy the customer's tastes and needs.	<b>.802</b>	<b>0.91</b>	<b>0.63</b>
	This Website provides high-quality products.	<b>.617</b>		
	This Website is distinguished in creating new products.	<b>.895</b>		
	This Website provides products at different prices and suitable for customers.	<b>.775</b>		
	This Website is constantly improving its products based on customer suggestions.	<b>.782</b>		
<b>Customer</b> <b>Value</b>	Spending a lot of time-sharing information about my needs and opinions with this website during the shopping process.	<b>.734</b>	<b>0.89</b>	<b>0.58</b>
	Putting a lot of effort into expressing my personal needs to this website during the shopping process.	<b>.817</b>		
<b>CO-Creation</b> ( $\alpha = .83$ )	I give advice to this website to provide new products and services.	<b>.862</b>		
	I give suggestions to this website on how to improving its product offerings.	<b>.834</b>		
	I am always participated in improving the services provided by this website.	<b>.776</b>		
	Being very much involved in deciding the payment way (cash money/ credit card).	<b>.690</b>		
	I would say positive things about this website to others.	<b>.765</b>		
	When I receive a good service, I will let this website know.	<b>.720</b>		
	When I have a new idea on how to improve service, I will let this website know.	<b>.590</b>		
	When I experience a problem, I will let this website know.	<b>.848</b>		
	I would do things that make this website job easier	<b>.654</b>		
	I would carefully observe the rules and policies of this website.	<b>.755</b>		
<b>E- Satisfaction</b> ( $\alpha = .80$ )	My decision to purchase from this website was a wise one.	<b>.852</b>	<b>0.92</b>	<b>0.63</b>
	I am satisfied with the shopping experience of this website.	<b>.888</b>		
	I have truly enjoyed purchasing from this website.	<b>.745</b>		
	I am satisfied with the product provided by this website.	<b>.689</b>		
	The performance of this website meets my expectation.	<b>.693</b>		
	I am satisfied with electronic purchasing with this website.	<b>.871</b>		
	Overall, I am satisfied with the online transaction service provided by this website.	<b>.766</b>		
<b>E-Trust</b> ( $\alpha = .73$ )	I am prepared to give my private information to this website.	<b>.921</b>	<b>0.95</b>	<b>0.78</b>
	This website always fulfills promises and commitments.	<b>.940</b>		
	This website is professional in online shopping field.	<b>.881</b>		
	I am willing to give my credit card number to this website.	<b>.842</b>		
	It is not a problem to pay in advance for purchased products over the internet.	<b>.821</b>		

$\alpha$  = Cronbach alpha; CR = composite reliability; AVE = average variance extracted

**Table 2**  
Model fit

Measure	Estimate	Threshold	Interpretation
CMIN	1974.28	-	-
DF	824	-	-
CMIN/DF	2.39	1 to 3	Excellent
NFI	.94	>0.90	Excellent
CFI	.96	>0.95	Excellent
RMSEA	.075	<0.80	Excellent
PCLOSE	.91	>0.05	Excellent

**Table 3**  
Correlativity, Mean Values, and Standard Deviations

Variables	Mean	Standard deviation	1	2	3	4
Online sale	.76	4.11	-			
CO-creation	.795	4.05	.576**	-	.517**	.494**
E-satisfaction	.73	4.18	.605**		-	
E-Trust	.77	4.1	.441**		.500**	-

\*\*Correlation is significant at the 0.01 level

As shown in Table 3, the correlations calculations of Online sale are connected to Customer value CO-creation ( $r = .576$ ,  $p < .01$ ) and E-Satisfaction ( $r = 0.605$ ,  $p < .01$ ) and connected with E-Trust ( $r = 0.441$ ,  $p < .01$ ). Therefore, it presents that the E-Trust is connected to Customer value CO-creation regarding the value of ( $r = 0.494$ ,  $p < .01$ ). E-satisfaction is positively connected to Customer value CO-creation regarding the value ( $r = 0.50$ ,  $p < .01$ ).

### 5.3 Structural Model

The assessment of the structural model is the final step after model measurement. As mentioned before, SEM was chosen because of the nature of the research model, the mediating effects.

#### 5.3.1. Direct effects

Structural equation modeling technique was used with AMOS program version 20. The result shows that the online sale has a positive direct effect on customer value co-creation ( $\beta = 0.373$ ,  $p < 0.001$ ). Therefore, H1 is accepted. Online sale has direct effects on E-Satisfaction ( $\beta = 0.682$ ,  $p < 0.13^{***}$ ) and E-Trust ( $\beta = 0.269$ ,  $p < 0.25^{***}$ ). E-Satisfaction has a direct effect on customer value co-creation ( $\beta = 0.283$ ,  $p < 0.23^{***}$ ). E-Trust has a direct effect on customer value co-creation ( $\beta = 0.161$ ,  $p < 0.14^{***}$ ). E-Satisfaction has a direct effect on E-Trust ( $\beta = 0.405$ ,  $p < 0.003$ ), see Table 4.

**Table 4**  
Results of SEM model

	Relations		Estimate	C.R.	P
Online sale	->	E-Satisfaction	0.682	14.468	0.13***
Online sale	->	E-Trust	0.269	3.894	0.25***
E-Satisfaction	->	E-Trust	0.405	6.609	0.003
E-Satisfaction	->	CV Co-creation	0.283	5.257	0.23***
E-Trust	->	CV Co-creation	0.161	3.307	0.14***
Online sale	->	CV Co-creation	0.373	7.060	0.001

\*\*\*=  $p < .001$

#### 5.3.1. Bootstrap analysis of the magnitude and statistical significance of the direct and indirect effects

In this article, the author(s) bootstrapped the sample with a resample of ( $n = 5,000$ ) using a bias-corrected confidence interval of 95% (Preacher et al., 2007). Show the indirect effect of online sale on Customer Value CO-Creation through E-Satisfaction ( $\beta = .049$ , 95% C.I = .063, .300), E-Trust ( $\beta = .007$ , 95% CI = .072, .236) are important. Hence, H2 and H3 are supported. In addition, and according to the results that have supported the second and third hypothesis, E-Satisfaction and E-Trust sequentially mediate the relationship between Online Sales and Customer Value CO-Creation, Hence, H4 is supported see Table 5.

**Table 5**  
Bootstrapped mediation results

Independent Variable	Mediator	Dependent Variable	Direct Effect (B)	Indirect Effect	CI Low	CI High
Online Sale	E-Satisfaction	Customer Value	0.12	.003	.063	.300
Online Sale	E-Trust	Customer Value	0.13	.007	.072	.236

## 6. Discussions

The present study included 364 customers (males, females) who shopped from the **Modanisa** website in Jordan as seen before. All results were as expected. Hence, all variables enhance the connection between the Online Sale and Customer Value CO-Creation through mediating variables, E-Trust and E-Satisfaction.

The study query "What is the relationship between online sale and the customer value CO-creation" has been positively verified by this analysis and all findings have been verified. The second study query "What is the impact of E-Satisfaction on customer value CO-creation" has been positively verified by this analysis and all findings have been verified. Regarding the findings of this study. The query "What is the impact of E-trust on customer value CO-creation" has also been addressed and verified. In particular, the findings of this study verified the query "How Do the E-Satisfaction & E-trust sequentially mediate the relationship between online sale and customer value CO-creation".

The approach of competing groups leads to a valuable outcome by co - creation of value. Limited research's results investigated the potential for consumers to be involved in understanding the relevance of finding catalysts that contribute to value-added motivations for shoppers. In any form of traditional value co-creation process, suppliers sell supplies with producers that deliver products to consumers. Financial hedging by the manufacturer as well as the provider's economic transaction in the form of product, and even the product offered to the customer. Therefore, companies rely on connectivity and strive to build on commercial value. Customer input could enhance the goods and services of any enterprise and without that, the enterprise can only determine the perceptions and abilities of customers.

We also understand that E-satisfaction and e-trust lead to online sales and consumer value CO-creation. This study contributes to an appreciation of the impact on electronic trust and electronic satisfaction of online purchases. We think the on-line purchases are even better for consumers with more favorable reactions. More broadly, our analysis determines the online selling criteria to decide the kinds of variables that respond more effectively.

### 6.1. Theoretical implications

We have tested and constructed the proposed model of how online sales affect customer value co-creation in the Modanisa website. Prior research for example has investigated the customer value co-creation and trust in social commerce in firms, value co-creation may be more important than trust in implementing high sale intentions (Pappas et al., 2017). Value co-creation in the sharing economy has also been tested (Nadeem et al., 2020). In addition, some previous researchers have found the relationship between customer value co-creation and other factors such as the effects on the consumer and the company (Haro et al., 2014), and engaging customers in value co-creation (Zhang et al., 2018).

However, in this paper the author has found that online sales had a positive relationship with organizational customer value co-creation. Our result is different from prior research where the researchers did not study the effect of E-trust and E-satisfaction on the relationship between online sale and customer value co-creation.

### 6.2. Limitations and future research

Significant limitations of this paper are that the work was carried out on the Modanisa website in Jordan. Therefore, the results of this study cannot be generalized; it is proposed that future studies will be carried out in other countries and in other sectors. Another co-creation activity that impacts businesses and customers, directly and indirectly, may be undertaken through more studies. Finally, more literature reviews should be further examined in future works in order to find certain factors which may mediate online sale.

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### References

- Al-Adaileh, M.J.A. (2015). The role of social media networks in influencing consumer purchasing decision online: An analytical study at Qassim University - Saudi Arabia, *The Jordanian Journal of Business Administration*, 11(1), 153-170.
- Al-Bourini, F. A., Aljawarneh, N. M., Bourini, I., Almaaitah, M. F., & kader Alomari, K. A. (2020). Directing Strategic Decision and Perceived Faculty Performance Using PLS Analysis and Monte Carlo Simulation in Jordanian Private Universities. *Journal of Talent Development and Excellence*, 12(3s), 2235-2252.
- Al-Da'abseh, T., Aljawarneh, N., & Shwiyat, Z. (2018). Marketing Mix strategies and its impact on organizational performance efficiency in the Jordanian company for investment and supply-Safeway: An empirical study. *Invention Journal of Research Technology in Engineering & Management*, 2(2), 14-23.
- Al-dweeri, R. M., Obeidat, Z. M., Al-dwiry, M. A., Alshurideh, M. T., & Alhorani, A. M. (2017). The impact of e-service quality and e-loyalty on online shopping: moderating effect of e-satisfaction and e-trust. *International Journal of Marketing Studies*, 9(2), 92-103.
- Al-Jawarneh, N. M. S. (2016). Case study: Business management school at the Turkish republic of north Cyprus and how strategic thinking and planning can improve the performance of the organization to maintain stable between competitors. *Invention Journal of Research Technology in Engineering & Management (IJRTEM)*, 1(5), 64-72.
- Aljawarneh, N. M. S., & Atan, T. (2018). Linking tolerance to workplace incivility, service innovative, knowledge hiding, and job search behavior: The mediating role of employee cynicism. *Negotiation and Conflict Management Research*, 11(4), 298-320.
- Aljawarneh, N. M., Abd kader Alomari, K., Alomari, Z. S., & Taha, O. (2020). Cyber incivility and knowledge hoarding: Does interactional justice matter?. *VINE Journal of Information and Knowledge Management Systems*.
- Aljawarneh, N. M., Sokiyna, M., Obeidat, A. M., Alomari, K. A. K., Alradaideh, A. T., & Alomari, Z. S. (2020). The role of CRM Fog computing on innovation and customer service quality: An empirical study. *Marketing and Management of Innovations*, 2, 286-297.
- Aljawarneh, N., & Al-Omari, Z. (2018). The role of enterprise resource planning systems ERP in improving customer relationship management CRM: An empirical study of Safeway company of Jordan. *International Journal of Business and Management*, 13(8), 86-100.
- Alomari, K. A. K., Aljawarneh, N. M., Alomari, Z. S., Albdareen, R., & Alawneh, A. (2020). Innovations in Knowledge Management Perspectives: An Empirical Study in the Jordanian Commercial and Islamic Banks. *Marketing and Management of Innovation*, 4, 102-119.
- Al-Omari, Z. S., Aljawarneh, N., Davut, S., & Salah, A. (2018). The Impact of Marketing Mix Elements on Forming Mental Images about Islamic Banks in Jordan: An Empirical Study. *OFFICIAL*, 12, 54.

- Al-Omari, Z., Alomari, K., & Aljawarneh, N. (2020). The role of empowerment in improving internal process, customer satisfaction, learning and growth. *Management Science Letters*, 10(4), 841-848.
- Alsafadi, Y., Aljawarneh, N., Çağlar, D., Bayram, P., & Zoubi, K. (2020). The mediating impact of entrepreneurs among administrative entrepreneurship, imitative entrepreneurship and acquisitive entrepreneurship on creativity. *Management Science Letters*, 10(15), 3571-3576.
- Al-Shabeel, S. (2012). Applications of Customer Relationship Management in the stages of e-procurement and its impact on building customer value, Master Thesis, Middle East University, Amman.
- Alshare, F., Aljawarneh, N., Alomari, K., Alomari, Z., Albdareen, R., Alwagfi, A., & Alradaideh, A. (2020). Factors influencing cellular device purchase decisions in Jordan. *Management Science Letters*, 10(11), 2501-2506.
- Alsmadi, S. (2002, October). Consumer attitudes towards online shopping in Jordan: Opportunities and challenges. In *The 1st Marketing Conference, UAE*.
- Alwagfi, A. A., Aljawarneh, N. M., & Alomari, K. A. (2020). Work Ethics and Social Responsibility: Actual and Aspiration. *Journal of Management Research*, (12)1, 26-36.
- Alzoubi, K., Aljawarneh, N. M., Alsafadi, Y., Al-Radaideh, A. T., & Altahat, S. (2020). Role of Cloud Computing in Service Quality, Information Quality & Low Costs: An Empirical Study on Jordanian Customs. *International Journal of Academic Research in Business and Social Sciences*, 10(6), 522–532.
- Bagozzi, R., & Yi, Y. (1988). On the evaluation of structural evaluation models. *Journal of the Academy of Marketing Science*, 16, 74–94.
- Bagozzi, R.P. (1980). On the construct validity of the expectancy-value model of attitude. New York City, NY; Cambridge, MA: Mimeo; Massachusetts Institute of Technology.
- Banyhamdan, K. M. T., Aljawarneh, N. M., Alomari, M. A., Almasarweh, M. S., Harafsheh, I. M., & Alwagfi, A. A. Impact of Human Capital in Quality and Strategic Excellences. *International Journal of Advanced Science and Technology*, 29 (7), 11702-11710.
- Bowden, J. L. H., Conduit, J., Hollebeek, L. D., Luoma-Aho, V., & Solem, B. A. (2017). Engagement valence duality and spillover effects in online brand communities. *Journal of Service Theory and Practice*.
- Byrne, B.M. (2013). *Structural equation modeling with Mplus: Basic concepts, applications, and programming*. Routledge.
- Yao, C., & Liao, S. (2011). Measuring the antecedent effects of service cognition and Internet shopping anxiety on consumer satisfaction with e-tailing service. *Management & Marketing Challenges for the Knowledge Society*, 6(1), 59-78.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *psychometrika*, 16(3), 297-334.
- Cyr, D., Kindra, G. S., & Dash, S. (2008). Web site design, trust, satisfaction and e-loyalty: the Indian experience. *Online Information Review*.
- Dabholkar, P. A. (1996). Consumer evaluations of new technology-based self-service options: an investigation of alternative models of service quality. *International Journal of research in Marketing*, 13(1), 29-51.
- Devaraj, S., Fan, M., & Kohli, R. (2002). Antecedents of B2C channel satisfaction and preference: validating e-commerce metrics. *Information Systems Research*, 13(3), 316-333.
- Dwidri. (2000). Scientific research, its theoretical foundations, and scientific practices. Contemporary House of Thought.
- Gefen, D., & Straub, D. W. (2000). The relative importance of perceived ease of use in IS adoption: A study of e-commerce adoption. *Journal of the Association for Information Systems*, 1(1), 8.
- Guo, X., Ling, K. C., & Liu, M. (2012). Evaluating factors influencing consumer satisfaction towards online shopping in China. *Asian Social Science*, 8(13), 40.
- Hair, J.F., Jr, Anderson, R.E., Tatham, R.L., & Black, W.C. (1998). *Multivariate Data Analysis*, (5th Edition). Upper Saddle River, NJ: Prentice-Hall.
- Haro, M. A. G., Ruiz, M. P. M., & Cañas, R. M. (2014). The effects of the value co-creation process on the consumer and the company. *Expert Journal of Marketing*, 2(2).
- Hernandez, B., Jimenez, J. and Martin, M. J. (2009). The impact of self-efficacy, ease of use and usefulness on e-purchasing: An analysis of experienced e-shoppers. *Interacting with Computer*, 21, 146–156.
- Hou, Y., Chen, H., & Yang, S. (2016). Research on the Business Model of E-commerce Platform based on Value Co-creation Theory. *International Journal of u and e-Service, Science and Technology*, 9(3), 415-424.
- Joreskog, K.G. (1971). Statistical analysis of sets of congeneric tests. *Psychometrika*, 36(2), 109–133. <https://doi.org/10.1007/BF02291393>.
- Kim E. Y., & Jackson V. P. (2009). The effect of e-SERVQUAL on e-loyalty for apparel online shopping. *Journal of Global Academy of Marketing Science*, 19(4), 57-65.
- Kitaneh, K. (2009). E-commerce. *Amman: Dar Al Masirah for Publishing and Distribution*.
- Kotler, P., Kartajaya, H., & Setiawan, I. (2010). *Marketing 3.0: From products to customers to the human spirit*. John Wiley & Sons.
- Lee, G.-G. & Lin, H.-F. (2005). Customer perceptions of e service quality in online shopping. *International Journal Retail & Distribution Management*, 33(2), 161-176.
- Ma, B., & Wei, Q. (2012). Measuring the coverage and redundancy of information search services on e-commerce platforms. *Electronic Commerce Research and Applications*, 11(6), 560-569.
- Mahafzah, A. G., Aljawarneh, N. M., Alomari, K. A. K., Altahat, S., & Alomari, Z. S. Impact of customer relationship management on food and beverage service quality: The mediating role of employees satisfaction. *Humanities & Social Sciences Reviews*, 8(2), 222-230.



- Masa'd, F., & Aljawarneh, N. (2020). Administrative creativity and job performance: An Empirical Study at Jadara University. *International Journal of Psychosocial Rehabilitation*, 24, 2020.
- McKinney, V., Yoon, K., & Zahedi, F. M. (2002). The measurement of web-customer satisfaction: An expectation and disconfirmation approach. *Information Systems Research*, 13(3), 296-315.
- Modanisa website. (2016). Retrieved September 05, 2016, from <https://www.almrsal.com/post/379645>
- Morris, M. G., & Turner, J. M. (2001). Assessing users' subjective quality of experience with the world wide web: an exploratory examination of temporal changes in technology acceptance. *International Journal of Human-Computer Studies*, 54(6), 877-901.
- Mustafa I. Eid (2011). Determinants of E-Commerce Customer Satisfaction, Trust, And Loyalty In Saudi Arabia. *Journal of Electronic Commerce Research*, 12(1),
- Nadeem, W., Juntunen, M., Shirazi, F., & Hajli, N. (2020). Consumers' value co-creation in sharing economy: The role of social support, consumers' ethical perceptions and relationship quality. *Technological Forecasting and Social Change*, 151, 119786.
- Pappas, I., Mikalef, P., Giannakos, M., & Pavlou, P. (2017). Value co-creation and trust in social commerce: An fsQCA approach.
- Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International journal of electronic commerce*, 7(3), 101-134.
- Perrewe, P.L., Hochwarter, W.A., Rossi, A.M., Wallace, A., Maignan, I., Castro, S.L., et al. (2002). Are work stress relationships universal? A nine-region examination of role stressors, general self-efficacy, and burnout. *Journal of International Management*, 8(2), 163-187.
- Prahalad, C. K., & Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. *Journal of Interactive Marketing*, 18(3), 5-14.
- Ranjan, K. R., & Read, S. (2014). Value co-creation: Concept and measurement. *Journal of the Academy of Marketing Science*, 44(3), 290-315.
- Reichheld, F. F., & Scheffer, P. (2000). E-loyalty: your secret weapon on the web. *Harvard Business Review*, 78(4), 105-113.
- Ribbink, D., Van Riel, A.C.R., Liljander, V. and Streukens, S. (2004). Comfort your online customer: quality, trust, and loyalty on the internet. *Managing Service Quality*, 14(6), 446-56.
- Ringle, C. M., Sarstedt, M., Mitchell, R., & Gudergan, S. P. (2020). Partial least squares structural equation modeling in HRM research. *The International Journal of Human Resource Management*, 31(12), 1617-1643.
- Safa, N. S., & Ismail, M. A. (2013). A customer loyalty formation model in electronic commerce. *Economic Modelling*, 35, 559-564.
- Szarucki, M., & Menet, G. (2018). Service marketing, value co-creation and customer satisfaction in the airsoft industry: case of a technology-based firm. *Business, Management and Education*, 16, 94-107.
- Szymanski, D. M., & Henard, D. H. (2001). Why some new products are more successful than others. *Journal of marketing Research*, 38(3), 362-375.
- Szymanski, D. M., & Hise, R. T. (2000). E-satisfaction: an initial examination. *Journal of Retailing*, 76(3), 309-322.
- Tan, M. & Teo, T. (2000) Factors Influencing the Adoption of Internet Banking, *Journal of the Association for Information Systems*, 1(5), 1-42.
- Vargo, S. L., Maglio, P. P., & Akaka, M. A. (2008). On value and value co-creation: A service systems and service logic perspective. *European Management Journal*, 26(3), 145-152.
- Wang, E. S.-T., & Chou, N. P.-Y. (2014). Consumer Characteristics, Social Influence, and System Factors On Online Group-Buying Repurchasing Intention, *Journal Of Electronic Commerce Research*, 15(2), 119-132.
- Xue, M., & Harker, P. T. (2002). Customer efficiency: Concept and its impact on e-business management. *Journal of Service Research*, 4(4), 253-267.
- Yi, Y., & Gong, T. (2013) Customer value co-creation behavior: scale development and validation. *Journal of Business Research*, 66, 1279-1284.
- Zeglat, D., Shrafat, F., & Al-Smadi, Z. (2016). The Impact of the E-Service Quality (E-SQ) of Online Databases on Users' Behavioural Intentions: A Perspective of Postgraduate Students. *International Review of Management and Marketing*, 6(1).
- Zhang, P., & Von Dran, G. M. (2000). Satisfiers and dissatisfiers: A two-factor model for website design and evaluation. *Journal of the American Society for Information Science*, 51(14), 1253-1268.
- Zhang, T., Lu, C., Torres, E., & Chen, P. J. (2018). Engaging customers in value co-creation or co-destruction online. *Journal of Services Marketing*.
- Ziaullah, M., Yi, F., & Akhter, S. N. (2014). E-loyalty: The influence of product quality and delivery services on e-trust and e-satisfaction in China. *International Journal of Advancements in Research & Technology*, 3(10), 20-31.



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